

Application No. 09/560294
 Amendment dated September 12, 2006
 After Final Office Action of April 21, 2006

Docket No.: 013217.0127C1US
 (Nielsen 3)

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A system for load balancing for wireless communication networks having a plurality of cells, each cell adapted to serve a plurality of mobile subscriber stations, comprising:

means, responsive to receipt of a service request from a mobile subscriber station, for establishing a communication connection for said requesting mobile subscriber station via at least one of said plurality of cells;

means for determining when assignment of said mobile subscriber station to a cell results in a predetermined traffic load threshold being exceeded, comprising:

means for measuring a traffic load in said cell,

means for comparing said measured traffic load to a predetermined traffic load threshold;

means, responsive to said predetermined traffic load threshold being exceeded, for identifying selecting at least one of a plurality of mobile subscriber stations served by said cell for reassignment to another cell, comprising:

means for identifying at least one of said plurality of mobile subscriber stations served by said cell with the lowest class of service,

means for arbitrating among said identified mobile subscriber stations, using additional criteria selected from call management factors, including: duration of call connection, location of mobile subscriber station within the cell, proximity to an adjacent cell, and signal strength in adjacent cells; and

means for initiating a handoff of said ~~one of said plurality of~~ selected at least one mobile subscriber ~~station~~ stations served by said cell to another cell in said wireless communication network.

Claim 2 (Canceled)

3. (Currently amended) The system for load balancing of claim 1 wherein said means for ~~identifying~~ selecting further comprises:

means for determining a class of service for said plurality of mobile subscriber stations served by said cell;

~~means for selecting at least one mobile subscriber station having the lowest class of service of said plurality of mobile subscriber stations served by said cell; and~~

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means for identifying another cell capable of serving said selected at least one mobile subscriber station.

4. (Cancelled)

5. (Currently amended) The system for load balancing of claim 1 ~~3 wherein said means for identifying further comprising comprises:~~

means for effecting a handoff of a communication connection that serves said selected at least one mobile subscriber station from said cell to said another cell.

6. (Currently amended) The system for load balancing of claim 1 ~~5 wherein said means for identifying further comprising comprises:~~

means, responsive to said means for effecting, for reviewing the additional criteria to determine whether additional handoffs of mobile subscriber stations to other cell sites is advisable.

7. (Currently amended) A method of load balancing for wireless communication networks having a plurality of cells, each cell adapted to serve a plurality of mobile subscriber stations, comprising the steps of:

establishing, in response to receipt of a service request from a mobile subscriber station, a communication connection for said requesting mobile subscriber station via at least one of said plurality of cells;

determining when assignment of said mobile subscriber station to a cell results in a predetermined traffic load threshold being exceeded, comprising:

measuring a traffic load in said cell,

comparing said measured traffic load to a predetermined traffic load threshold;

~~identifying selecting~~, in response to said predetermined traffic load threshold being exceeded, at least one of a plurality of mobile subscriber stations served by said cell for reassignment to another cell, comprising:

identifying at least one of said plurality of mobile subscriber stations served by said cell with the lowest class of service,

arbitrating among said identified mobile subscriber stations, using additional criteria selected from call management factors including: duration of call connection, location of

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mobile subscriber station within the cell, proximity to an adjacent cell, and signal strength in adjacent cells; and

initiating a handoff of said ~~one of said plurality of~~ selected at least one mobile subscriber stations ~~served by said cell~~ to another cell in said wireless communication network.

Claim 8 (Canceled)

9. (Currently Amended) The method of load balancing of claim 7 wherein said step of identifying selecting further comprises:

determining a class of service for said plurality of mobile subscriber stations served by said cell;

~~selecting at least one mobile subscriber station having the lowest class of service of said plurality of mobile subscriber stations served by said cell; and~~

identifying another cell capable of serving said selected at least one mobile subscriber station.

10. (Cancelled)

11. (Currently amended) The method of load balancing of claim ~~7~~ 9 wherein said step of ~~identifying further comprising~~ comprising comprises:

effecting a handoff of a communication connection that serves said selected at least one mobile subscriber station from said cell to said another cell.

12. (Currently amended) The method of load balancing of claim ~~7~~ 11 wherein said step of ~~identifying further comprising~~ comprising comprises:

reviewing, in response to said step of effecting, the additional criteria to determine whether additional handoffs of mobile subscriber stations to other cell sites is advisable.

13. (Currently amended) A system for load balancing for wireless communication networks having a plurality of cells, each cell adapted to serve a plurality of mobile subscriber stations, comprising:

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service request processing means, responsive to receipt of a service request from a mobile subscriber station, for establishing a communication connection for said requesting mobile subscriber station via at least one of said plurality of cells;

traffic load determining means for determining when assignment of said mobile subscriber station to a cell results in a predetermined traffic load threshold being exceeded, comprising:

traffic load measurement means for measuring a traffic load in said cell,

traffic threshold means for comparing said measured traffic load to a predetermined traffic load threshold;

subscriber class of service identification means, responsive to said predetermined traffic load threshold being exceeded, for ~~identifying~~ selecting at least one of a plurality of mobile subscriber stations served by said cell for reassignment to another cell, comprising:

mobile subscriber station identification means for identifying at least one of said plurality of mobile subscriber stations served by said cell with the lowest class of service,

additional criteria determining means for arbitrating among said identified mobile subscriber stations, using additional criteria selected from call management factors, including: duration of call connection, location of mobile subscriber station within the cell, proximity to an adjacent cell, and signal strength in adjacent cells; and

handoff means for initiating a handoff of said ~~one of said plurality of~~ selected mobile subscriber stations served by said cell to another cell in said wireless communication network.

Claim 14 (Canceled)

15. (Currently amended) The system for load balancing of claim 13 wherein said subscriber class of service identification means comprises:

class of service means for determining a class of service for said plurality of mobile subscriber stations served by said cell;

~~mobile subscriber station selection means for selecting at least one mobile subscriber station having the lowest class of service of said plurality of mobile subscriber stations served by said cell;~~
 and

candidate cell means for identifying another cell capable of serving said selected at least one mobile subscriber station.

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16. (Cancelled)

17. (Currently amended) The system for load balancing of claim 13 ~~[[15]]~~ wherein said subscriber class of service identification means further comprises:

handoff activation means for effecting a handoff of a communication connection that serves said selected at least one mobile subscriber station from said cell to said another cell.

18. (Currently amended) The system for load balancing of claim 13 ~~[[17]]~~ wherein said subscriber class of service identification means further comprises:

threshold review means, responsive to said handoff activation means, for reviewing the additional criteria to determine whether additional handoffs of mobile subscriber stations to other cell sites is advisable.